# **EXHIBIT 4**



# Semi-Annual Report Gas Collection and Control System Arecibo Municipal Solid Waste Landfill

Prepared by: Landfill Technologies of Arecibo, LLC.

July to December 2021

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#### I. Introduction

This semi-annual report has been prepared for the Gas Collection and Control System (GCCS) of Arecibo Municipal Solid Waste Landfill pursuant to 40 Code Federal Regulations (CFR) Part 60 Subpart WWW, New Source Performance Standards (NSPS) for Municipal Solid Waste Landfill and 40 CFR Part 63 Subpart AAAA, National Emission Standard for Hazardous Air Pollutants (NESHAP). This semi-annual report corresponds to the period from July to December 2021.

## II. System Description

The Arecibo Municipal Solid Waste Landfill is located in Arecibo, Puerto Rico and is owned and operated by Landfill Technologies of Arecibo, LLC (LTA). The Arecibo landfill began receiving refuse in 1973. The has a total footprint of approximately 100 acres. The design capacity is approximately 6,352,750 Megagrams (Mg).

In accordance with 40 CFR 60.757(f) and 40 CFR 60.1980 (a), Landfill Technologies of Arecibo, LLC performed this semi-annual report for the Gas Collection and Control System of the Arecibo Municipal Solid Waste Landfill.

## III. Summary monitoring

# A. Monthly monitoring at all wellheads

During the period of July to December, monitoring data of the GCCS of Arecibo Landfill have been collected. The monitoring data were sampled using QED - GEM 5000. Wellhead monitoring data included: gauge pressure and temperature at all wellheads.

The gauge pressure for all wellheads during this period were negative. Corrective actions were not necessary to perform during this period.

The temperature was measured at each wellhead. Occurrences of elevated operating temperatures were showed for few wellheads during this reporting period. It will be evaluated if a high operating temperature will be request for the wells that presented exceedance, near to 131°F.

#### B. Bypass operation

There is no bypass operation of the GCCS of Arecibo Landfill during the period of July to December 2021.

#### C. Control Device Downtime

The reasons of the shutdown and malfunction events of the control device were recorded during the period of July to December 2021. The Attachment A present the reasons, duration, and corrective actions of the events.

#### D. Surface Emission Monitoring

Quarterly surface emissions monitoring for the third and fourth quarter 2021 were performed by LTA personnel. Testing was performed using the portable surface detector, SEM 5000. The surface methane operational standards consist of monitoring the surface emissions of methane along the entire perimeter of the collection area and along a serpentine patter 30 meter apart (or site specific established spacing) for each collection area.

Quarterly surface emissions monitoring for the period between July to September 2021, was conducted on August 27<sup>th</sup> and 28<sup>th</sup>, 2021. There were no exceedances during the monitoring.

Quarterly surface emissions monitoring for the period between October to December 2021, was conducted on November 4<sup>th</sup> and 5<sup>th</sup>, 2021. There were no exceedances during the monitoring.

### E. Landfill Gas Collection and Control System Expansion

The GCCS of Arecibo Landfill was not expanded during the period of July to December 2021.



# Appendix A

# Semi-Annual Report Shutdown and Malfunction Report Arecibo Municipal Solid Waste Landfill

July to December 2021

Prepared by: Landfill Technologies of Arecibo, LLC

#### Landfill Technologies of Arecibo, LLC Shutdown and Malfunction Report July to December 2021 Arecibo Municipal Solid Waste Landfill

Shutdown Date	Duration	Shutdown	Description	Corrective Action
7/16/2021	1.5	Flame Fault	This was caused by power failure of electricity.	The electrical energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
7/20/2021	2	Flame Fault	This was caused by power failure of electricity.	The electrical energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
7/26/2021	15	Flame Fault	Lateral Pipe broke and it caused air intrusion to the line, and this caused a power failure of electricity at the electrical generator.	The pipe was repaired. The electrical energy was re-established and was kept on operation throughout the day as expected.
7/30/2021	36	No Alarm	Power Supply of the control panel failure.	The power supply was replaced. The system was restarted and was kept on operation throughout the day as expected.
8/8/2021	4	Flame Fault	This was caused by power failure of electricity.	The electrical energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
8/13/2021	5	Flame High Temperature	Lateral Pipe broke it caused air intrusion.	The pipe was repaired and the system was restarted and was kept on operation throughout the day as expected.
8/15/2021	10	Flame Fault	This was caused by power failure of electricity.	The electrical energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
8/28/2021	30	Flame Fault	This was caused by power failure of electricity.	The electrical energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
9/6/2021	12	Flame Fault	This was caused by power failure of electricity.	The electrical energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
9/8/2021	15	Low Air Pressure	Low Air Pressure caused shutdown of the electrical generator	The equipment was inspected. The system was restarted and was kept on operation throughout the day as expected.
11/19/2021	1.5	No Alarm	Regular Maintenance	The preventive maintenancec was completed. The system was restarted and was kept on operation throughout the day as expected.
12/18/2021	19	Flame Fault	This was caused by power failure of electricity.	The electrical energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
12/27/2021	21	No Alarm	Regular Maintenance	The preventive maintenancec was completed.  The system was restarted and was kept on operation throughout the day as expected.